



DEFENSE LOGISTICS AGENCY
DEFENSE SUPPLY CENTER, COLUMBUS
3990 EAST BROAD STREET
COLUMBUS, OH 43218-3990

IN REPLY
REFER TO

DSCC-VAT

15 October 2004

MEMORANDUM FOR MILITARY/INDUSTRY DISTRIBUTION

SUBJECT: Proposed Drafts of MS25271J w/Amendment 1; MS25273J w/Amendment 1; MS27418K w/Amendment 1; Project Numbers 5945-1273 to 5945-1275

The initial drafts of the subject documents are now available for viewing and downloading from the DSCC-VA Web site:

<http://www.dsccl.dla.mil/Programs/MilSpec/DocSearch.asp>

The proposed drafts of the subject documents are forwarded for your review and comment. The proposed documents identify corrections and changes in dimensions, operating characteristics, and conformance inspection requirements. Vertical lines in the margins are intended to mark the location of changes.

If these documents are of interest to you, please submit your typed comments or suggestions using electronic mail or by letter. Comments may be resubmitted if it is believed that insufficient consideration has been given to previous comments. Please provide additional justification for these items. Comments or suggested changes that are not editorial in nature should include justification. Industrial activities should indicate whether they are commenting from the standpoint of a "User" or "Manufacturer." Military review activities should forward comments to their custodians in sufficient time to allow for consolidating the departmental reply. All agencies, industry, and coordinated custodian comments should be sent to this center. Comments originating from the military departments must be identified as either "Essential" or "Suggested." Essential comments, which must be accepted or withdrawn, should be supported by test data unless they obviously require no data.

Comments should be returned to this Center no later than 45 days from the date of this letter. If no response is received by the specified date, it is assumed that you concur with the documents. Any further coordination concerning these documents will be circulated only to firms and organizations that furnish comments or reply that they have an interest.

If there are any questions, please contact Mr. Jim Crum, by electronic mail at James.Crum@dlal.mil (preferred method of notification); by telephone at commercial 614-692-0542, DSN 850-0542; by facsimile 614-692-6939; or by mail at Defense Supply Center Columbus, Electronic Components Team, DSCC-VAT, P.O. Box 3990, Columbus, OH 43218-3990.

Signature on File

KENDALL A. COTTONGIM
Chief
Electronic Components Team

3 Attachments



NOTE: This draft, dated 15 October, 2004 prepared by DLA-CC has not been approved and is subject to modification.
DO NOT USE FOR ACQUISITION PURPOSES. (Project 5945-1274)

INCH-POUND

MS25273H
w/AMENDMENT 1
DRAFT
SUPERSEDING
MS25273H
27 November 2003

DETAIL SPECIFICATION SHEET

RELAYS, ELECTROMAGNETIC, 10 AMPERES,
2 PDT, TYPE I, SOLDER TERMINALS,
STUD MOUNTED, HERMETICALLY SEALED

INACTIVE FOR NEW DESIGN AFTER 15 NOVEMBER
2002. NO SUPERSEDING SPECIFICATION.

This specification is approved for use by all Departments
and Agencies of the Department of Defense.

The requirements for acquiring the relay described herein shall
consist of this specification and the latest issue of MIL-PRF-6106.

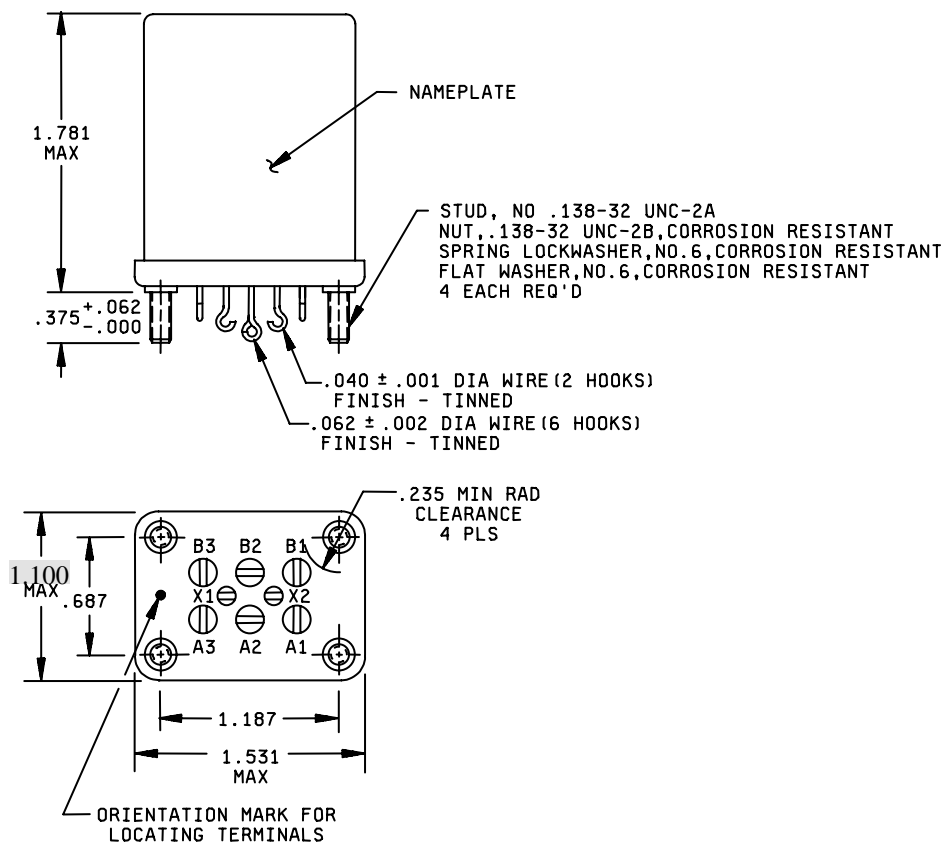
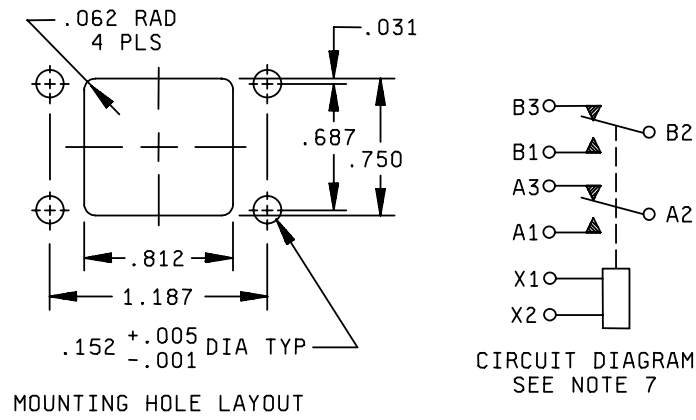


FIGURE 1. Dimensions and configurations.

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Inches	mm	Inches	mm
.001	0.03	.235	5.97
.002	0.05	.357	9.53
.005	0.13	.687	17.45
.010	0.25	.750	19.05
.031	0.79	.812	20.62
.040	1.02	1.100	27.94
.062	1.57	1.187	30.15
.138	3.51	1.531	38.89
.152	3.86	1.781	45.24
.187	4.75		

NOTES:

- 1/ Dimensions are in inches.
- 2/ Metric equivalents are given for general information only.
- 3/ Unless otherwise specified, tolerance is ± 0.010 (0.25 mm).
- 4/ Terminal numbers need not appear on relay header provided there is affixed to the relay a suitable legible circuit diagram that permanently and positively identifies each terminal location specified herein.
- 5/ In the event of conflict between the text of this specification and the references cited herein, the text of this specification shall take precedence.
- 6/ Referenced Government documents of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation forms a part of this specification to the extent specified herein.
- 7/ The use of diodes on ac relays is optional. Actual application must be shown on label (dash numbers -A1 and -A2 are inactive for new design).

FIGURE 1. Dimensions and configurations - Continued.

TABLE I. Dash numbers and characteristics.

Dash number MS25273-	Type	Coil	Terminal type	Mounting	Max weight in pounds
D1	I	dc	Solder hook	Stud	.30
A1 1/	I	ac	Solder hook	Stud	.32
A2 1/	I	ac	Solder hook	Stud	.32

- 1/ Dash number -A1 and -A2 are inactive for new design and shall be used for support of existing systems only.

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TABLE II. Operating characteristics.

PIN MS25273-	Coil data											Time - (milliseconds max)					
	Coil	Rated			Max		1/ Max pick-up voltage			Drop out vol- tage 2/	Hold vol- tage 2/	Op- erate 3/	Rel- ease 4/	Contact Bounce			
		Volts 1/	Freq Hz	Res Ω ±10%	Volts	Amp	Nor- mal 2/	High temp test	Cont cur- rent test					Main		Aux	
														NO	NC	NO	NC
D1	X1, X2	28	dc	175	29	0.20	18	19.5	22.5	1.5	7.0	20	20	2	2	N/A	N/A
A1 5/ 6/	X1, X2	115	400	N/A	122	0.07	90	95	103	5.0	30	25	50	2	2	N/A	N/A
A2 6/	X1, X2	115	50/60	N/A	122	0.10	90	95	103	5.0	30	25	50	2	2	N/A	N/A

^{1/} CAUTION: Use of any coil voltage less than rated coil voltage will compromise the operation of the relay.

^{2/} Over the temperature range.

^{3/} With nominal coil voltage.

^{4/} From nominal coil voltage.

^{5/} MS25273-A1 may be used on 60 Hz if maximum ambient temperature is limited to +85°C (maximum coil current shall be 0.0777 ampere).

^{6/} Inactive for new design.

TABLE III. Rated contact load (amperes per pole) (case grounded).

Type of load	Life operating cycles x 10 ³	28 V dc				115 V ac, 1 phase				115/200 V ac, 3 phase 1/				See appropri- ate notes
		Main		Aux		Main		Aux		Main		Aux		
		NO	NC	NO	NC	400 Hz	60 Hz	400 Hz	60 Hz	400 Hz	60 Hz	400 Hz	60 Hz	
Resistive	100	10	10			10	6			10	6			
Inductive	100													
Inductive	20	6	6			6	4			6	4			
Motor	100	4	4			4	3			4	3			
Lamp	100	2	2			2	1.5			2	1.5			
Transfer load														2/
Mechanical life reduced current	400	2.5	2.5			2.5	2			2.5	2			
Mixed loads	Applicable per specification													

^{1/} Absence of value indicates relay is not rated for 3-phase applications.

^{2/} Transfer load indicates relay is suitable for transfer between unsynchronized ac power supplies at rating indicated.

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Environmental characteristics.

Temperature range	-70°C to +125°C
Max altitude rating	80,000 ft
Shock G-level	50 g's
Duration	11 ms
Max duration contact opening	10 µs
Vibration - sinusoidal (see chart below)	
G-level	10 g's
Frequency range	5-1,500 Hz
Acceleration	15 g's

Electrical characteristics.

Insulation resistance, initial	100 megohms.
After life or environmental tests	50 megohms.

Dielectric strength (sea level).

	<u>Initial</u>	<u>After life tests</u>
Coil to case	1,000 V rms	1,000 V rms
Aux contacts	1,500 V rms	1,125 V rms
All other points		

Dielectric strength (altitude).

	<u>80,000 ft</u>
Coil to case	250 V rms
Aux contacts	
All other points	350 V rms

Max contact drop initial	0.150 volt.
After life test	0.175 volt.
Overload current	40 amperes dc, 60 amperes ac.
Rupture current	50 amperes dc. 80 amperes ac.
Duty rating	Continuous.
RFI specification	MIL-STD-461
(Applicable to coil circuits of ac operated relays).	

Conformance inspection.

Group B and group C testing are not required. The manufacturer shall notify the qualifying activity in the event of any design or construction changes, and shall impose additional testing requirements as necessary.

Qualification by similarity: See MIL-PRF-6106.

NOTES

Referenced documents. In addition to MIL-PRF-6106, this document references the following:

MIL-STD-461

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The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Custodians:
Navy - AS
Air Force - 11
DLA - CC

Preparing activity:
DLA - CC
(Project 5945-1274)

Review activities:
Navy - EC

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using ASSIST Online database at www.dodssp.daps.mil.